

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing Of Claims:**

1. (Currently Amended) ~~A method of minimizing buffer requirements in a~~ **In a digital** packet based multimedia system having a multimedia source device coupled to a multimedia display device by way of a bi-directional auxiliary channel arranged to transfer information between the display device and a source device and vice versa and a unidirectional main link arranged to carry multimedia data packets **in the form of an multi-media data packet stream** from the multimedia source device to the multimedia display device **wherein each of the multimedia data packets includes at least a multimedia data packet header**, a method of reducing multimedia packet overhead, comprising:

prior to commencement of transmission of the data packets from the source device to the display device over the main link, communicating via the auxiliary channel ~~data~~ **multi-media data** packet **stream** attributes to the display device, **wherein the data packet stream attributes includes information used by the display device to at least identify the data packets of a particular stream, to recover original data from the data packet stream or to format the data packet stream back to a data packet stream native data rate;**

~~forming a reduced size data packet header for each of the data packets wherein the reduced size is commensurate with the data packet attributes already communicated via the auxiliary channel and therefore reduces buffer requirements;~~

~~associating the reduced size data packet headers with a corresponding one of the data packets~~ **replacing the data packet header with a corresponding reduced size data packet header for each of the multimedia data packets at the source device commensurate with the data packet stream attributes already communicated via the auxiliary channel;**  
**and**

streaming the multi-media data packets having the reduced size data packet header from the source device to the display; and

sending information associated with the streaming between the source device and the display device by way of the auxiliary channel concurrent with the streaming.

~~transmitting the data packets and associated reduced size data packet headers from the source device to the display device over the main link and~~

~~interspersing special characters that allow the display device to distinguish each bit of pixel data included in the data packets thereby requiring only a small FIFO type buffer unit and the main link to maintain synchronization such that neither the main link nor the auxiliary channel include a clock line.~~

2. (Original) A method as recited in claim 1, wherein the data packet is one of a number of associated multimedia data packets that take together form a multimedia data packet stream.

3. (Original) A method as recited in claim 2, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an associated adjustable data stream link rate that is independent of a native stream rate.

4. (Previously presented) A method as recited in claim 1, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry display related information from the display device to the source device and a uni-directional forward channel included as part of the main link for carrying source related information from the source device to the display device in concert with the back channel.

5. (Original) A method as recited in claim 4, further comprising:

forming a number of virtual links each being associated with a particular one of the multimedia data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

6. (Original) A method as recited in claim 5, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

7. (Currently Amended) In a digital packet based multimedia system having a multimedia source device coupled to a multimedia display device by way of a bi-directional auxiliary channel arranged to transfer information between the display device and a source device and vice versa and a unidirectional main link arranged to carry multimedia data packets in the form of an multi-media data packet stream from the multimedia source device to the multimedia display device wherein each of the multimedia data packets includes at least a multimedia data packet header, an apparatus for reducing multimedia packet overhead, comprising:

means for communicating via the auxiliary channel multi-media data packet stream attributes to the display device prior to commencement of transmission of the data packets from the source device to the display device over the main link, wherein the data packet stream attributes includes information used by the display device to at least identify the data packets of a particular stream, to recover original data from the data packet stream or to format the data packet stream back to a data packet stream native data rate;

means for replacing the data packet header with a corresponding reduced size data packet header for each of the multimedia data packets at the source device commensurate with the data packet stream attributes already communicated via the auxiliary channel;

means for streaming the multi-media data data packets having the reduced size data packet header from the source device to the display concurrently; and

means for sending information associated with the streaming between the source device and the display by way of the auxiliary channel concurrent with the streaming  
~~minimizing buffer requirements in a packet based multimedia system having a multimedia source device coupled to a multimedia display device by way of a bi-directional auxiliary channel arranged to transfer information between the display device and a source device and vice versa and a unidirectional main link arranged to carry multimedia data packets from the multimedia source device to the multimedia display device, comprising:~~

~~means for communicating via the auxiliary channel data packet attributes to the display device prior to commencement of transmission of the data packets from the source device to the display device over the main link;~~

~~means for forming a reduced size data packet header for each of the data packets wherein the reduced size is commensurate with the data packet attributes already communicated via the auxiliary channel;~~

~~means for associating the reduced size data packet header with the data packets;~~

~~means for transmitting the data packets and associated reduced size data packet headers from the source device to the display device over the main link; and~~

~~means for interspersing special characters that allow the display device to distinguish each bit of pixel data included in the data packets thereby requiring only a small FIFO type buffer unit and the main link to maintain synchronization such that neither the main link nor the auxiliary channel include a clock line.~~

8. (Currently Amended) An apparatus as recited in claim 7, wherein the data packet is one of a number of associated multimedia data packets that take together ~~form a~~ **form the** multimedia data packet stream.

9. (Original) An apparatus as recited in claim 8, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an associated adjustable data stream link rate that is independent of a native stream rate.

10. (Previously presented) An apparatus as recited in claim 8, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry display related information from the display device to the source device and a uni-directional forward channel included as part of the main link for carrying source related information from the source device to the display device in concert with the back channel.

11. (Original) An apparatus as recited in claim 10, further comprising:  
means for forming a number of virtual links each being associated with a particular one of the multi media data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

12. (Original) An apparatus as recited in claim 11, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

13. (Currently Amended) Computer readable medium encoded with a computer program **and executable by a processor** for **reducing multimedia packet overhead in a digital packet based multimedia system having a multimedia source device coupled to a**

multimedia display device by way of a bi-directional auxiliary channel arranged to transfer information between the display device and a source device and vice versa and a unidirectional main link arranged to carry multimedia data packets in the form of an multi-media data packet stream from the multimedia source device to the multimedia display device wherein each of the multimedia data packets includes at least a multimedia data packet header , comprising:

computer code for communicating via the auxiliary channel multi-media data packet stream attributes to the display device prior to commencement of transmission of the data packets from the source device to the display device over the main link,, wherein the data packet stream attributes includes information used by the display device to at least identify the data packets of a particular stream, to recover original data from the data packet stream or to format the data packet stream back to a data packet stream native data rate;

computer code for replacing the data packet header with a corresponding reduced size data packet header for each of the multimedia data packets at the source device commensurate with the data packet stream attributes already communicated via the auxiliary channel; and

computer code for streaming the multi-media data packets having the reduced size data packet header from the source device to the display;

computer code for sending information associated with the streaming between the source device and the display by way of the auxiliary channel concurrent with the streaming; and

computer readable medium for storing the computer code.

~~minimizing buffer requirements in a packet based multimedia system having a multimedia source device coupled to a multimedia display device by way of a bi-directional~~

~~auxiliary channel arranged to transfer information between the display device and the source device and vice versa and a unidirectional main link arranged to carry multimedia data packets from the multimedia source device to the multimedia display device, the computer program comprising:~~

~~computer code for communicating via the auxiliary channel data packet attributes to the display device prior to commencement of transmission of the data packets from the source device to the display device over the main link;~~

~~computer code for forming a reduced size data packet header for each of the data packets wherein the reduced size is commensurate with the data packet attributes already communicated via the auxiliary channel;~~

~~computer code for associating the reduced size data packet header with a corresponding one of the data packets;~~

~~computer code for transmitting the data packet and associated reduced size data packet header from the source device to the display device over the main link; and~~

~~computer code for interspersing special characters that allow the display device to distinguish each bit of pixel data included in the data packets thereby requiring only a small FIFO type buffer unit and the main link to maintain synchronization such that neither the main link nor the auxiliary channel include a clock line.~~

14. (Currently Amended) Computer program product as recited in claim 13, wherein the data packet is one of a number of associated multimedia data packets that take together **form** ~~the form a~~ multimedia data packet stream.

15. (Original) Computer program product as recited in claim 14, wherein the multimedia data packet stream is one of a number of multimedia data packet streams each having an associated adjustable data stream link rate that is independent of a native stream rate.

16. (Previously Presented) Computer program product as recited in claim 13, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry information from the sink device to the source device and a uni-directional forward channel included as part of the main link for carrying information from the source device to the sink device in concert with the back channel.

17. (Original) Computer program product as recited in claim 16, further comprising:  
forming a number of virtual links each being associated with a particular one of the multimedia data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

18. (Original) Computer program product as recited in claim 17, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.